

LANDSAT MONTHLY UPDATE

October 2002

The U.S. Geological Survey under authority established by Presidential Decision Directive NSTC-3 manages the Landsat Program.

Program News

Delta-i Maneuver

On October 8, 2002, Landsat 7 Flight Operations performed a complex two-burn delta-inclination (delta-i) maneuver to maintain the Landsat 7 mission specification for a 10AM (+/- 15 min) ascending node crossing. The delta-i is a yearly event needed to correct for orbital disturbances and keep the spacecraft in a sun-synchronous orbit on the Worldwide-Reference System (WRS) 16-day repeating ground track. Coincident with the delta-i, calibration, imaging by the Landsat 7 Enhanced Thematic Mapper Plus (ETM+) instrument took place.

Two consecutive burns were executed, each approximately 700 seconds in duration. Both burns were preceded by a 90.5-degree Yaw slew in order to orient the thrust jets nearly perpendicular to the orbit velocity vector, followed by a return slew. Two orbits separated the burns to confirm spacecraft health and safety prior to executing the second slew-burn-yaw combination.



Landsat 7 Flight Ops Team

As a consequence of the delta-i operations, the ETM+ cold focal plane heats above normal operating temperatures. During the cool down operations, calibration imaging took place during a 40-hour period prior to resuming normal imaging operations. The cool down imaging helps the Landsat Science Project Office better understand the performance of the ETM+ calibration lamps.

IGS Metadata

The orbit modifications, resulting from the dual delta-i, are nearly identical to the pre-burn predictions. Landsat 7 is positioned for another year of highly successful mission operations.

IGS Metadata from Canada, Australia, South Africa, China, Argentina, Thailand, and Europe continue to be archived successfully. As of October 31, 2002 there were 13,294 L7 IGS subintervals archived for 220,533 Landsat 7 Worldwide Reference System (WRS) scenes.

Landsat 5 Bumper Mode Parameters

The Landsat Project is now posting Landsat 5 Bumper Mode calibration parameters on the Landsat web site at <http://landsat7.usgs.gov/cpf/l5/index.html>. These parameters are used to process Landsat 5 Bumper Mode data and are described in the Landsat 5 Bumper Mode Algorithm specification located at <http://landsat7.usgs.gov/resource.html>. These parameters will be updated and posted to the Landsat web site on a monthly basis for users to download.

Technical News

Data Validation

The Alice Springs, Hobart Australia, and Hatoyama, Japan ground stations provided the USGS with LORp data for their biannual revalidations during the month of October. All validation exercises were successful and the data were found to be of equivalent quality to the corresponding USGS data.

The USGS is responsible for providing the IGS with data for validation purposes on an annual basis. In October eleven IGS were shipped an LORp scene, found in their acquisition circle, on CD from the USGS. At this time China has responded that they processed the USGS LORp data to a L1G product successfully.

8mm Tape for Product Distribution

Due to low demand and technical issues associated with 8mm tape usage, the Landsat Project is evaluating the elimination of 8mm tape based products from the Landsat 7 product line. Landsat Program management staff are interested in understanding if customers would like to receive 8mm based Landsat 7 products into the future before making a final decision on this issue. Please send your comments to Rynn Lamb at lamb@usgs.gov by November 29th if you would like EDC to continue offering 8mm tape as a media option for Landsat 7 products.

Meetings

31st Landsat Ground Station Operators Working Group Meeting

The 31st Landsat Ground Station Operators Working Group (LGSOWG) meeting was held in Matera, Italy the week of October 14th. Representatives from all ten Landsat 7 International Cooperators (ICs) were in attendance. Participants enjoyed a full week of technical presentations and discussions, a tour of the European Space Agency's Matera Ground Station operated by Telespazio, and the opportunity to interact informally during evening events in the Matera area. Among the meeting highlights were presentations by Landsat Data Continuity Mission (LDCM) formulation contractors, Resource 21, and Digital Globe, on their plans to provide LDCM data to the ICs. A special note of thanks goes to the hosts at the European Space Agency (ESA) for a well planned and executed event. A CD-ROM will soon be mailed to all participants containing the presentation materials and meeting minutes.

Satellite Business Partners Workshop

A one-day workshop, sponsored by the U.S. Geological Survey, will be held for the Satellite Business Partner community (current and prospective) on November 15, 2002. The workshop will be held at the Adams-Mark Hotel in Denver, Colorado, the site of the Pecora 15/Land Satellite IV conference. The meeting will cover USGS plans for the Satellite Business Partners Program, changes to the distribution or pricing of data, and new data sets or delivery systems that may assist the Satellite Business Partners. Secondly, the USGS is interested in hearing Satellite Business Partners concerns and views of market changes with the view of assisting the Satellite Business partners. Contact Ronald Parsons (parsons@usgs.gov) or by telephone (605-594-6557.)

The Landsat monthly update is an informal communication tool, prepared monthly and distributed electronically to USGS Landsat partners, to provide information about Landsat activities and related topics of interest. Comments, corrections, and queries may be directed to Ronald Beck, USGS Landsat team, at the following e-mail address: beck@usgs.gov.

U.S. Department of the Interior
U.S. Geological Survey